# Permit Fact Sheet

## General Information

| | |
|---|---|
| Permit Number: | WI-0064505-03-0 |
| Permittee Name: | Bomaz Farms |
| Address: | 426 165 Street |
| City/State/Zip: | Hammond WI 54015 |
| Discharge Location: | 426 165th Street and 1609 County Road Z, Hammond WI |
| Receiving Water: | Surface and Groundwater within the Kinnickinnic River and St. Croix River Watersheds |

| **Animal Units** | | | | | |
|---|---|---|---|---|---|
| | **Current AU** | | **Proposed AU** **(Note: If all zeroes, expansions are not expected during permit term)** | | |
| **Animal Type** | **Mixed** | **Individual** | **Mixed** | **Individual** | **Date of Proposed Expansion** |
| Dairy Calves (under 400 lbs.) | 42 | 0 | 70 | 0 | 05/01/2022 |
| Milking and Dry Cows | 1330 | 1359 | 2240 | 2288 | 05/01/2022 |
| Heifers (400 lbs. to 800 lbs.) | 79 | 132 | 210 | 350 | 05/01/2022 |
| Heifers (800 lbs. to 1200 lbs.) | 275 | 250 | 275 | 250 | 05/01/2022 |
| Total | 1726 | 1359 | 2795 | 2288 | |

## Facility Description

**Brief Facility Description**: Bomaz Farms is an existing Concentrated Animal Feeding Operation (CAFO) dairy farm in St. Croix County, within the township of Pleasant Valley. Bomaz Farms is owned and operated by Bob (Kay) Zwald, Tom (Ashley) Zwald, and Annette (Steve) Schalla of the Zwald Family.

Bomaz Farms consists of two sites: Main Dairy Farm and Heifer Farm. The Main Dairy Farm includes three freestall barns; rotary milking parlor; feed storage pad; three waste storage facilities; composting pad; and sand settling lane. The Heifer Farm consists of multiple heifer sheds; two outdoor concrete feed lots; calf hutch area; and Slurry Store used to store runoff from outdoor lots.

Bomaz Farms is operating at 1,745 animal units (AUs), including milking cows, dry cows, heifers, and calves. On April 17, 2015 DNR approved Bomaz Farms' five-year NMP for 2,320 AUs which included 2,320 acres available for land application of manure and process wastewater. On March 17, 2021 DNR approved the NMP for Bomaz Farms which included the proposal to expand to 2,905 AUs and included 3,099.8 acres available for land application of manure and process wastewater.

| Sample Point Designation for Animal Waste | | |
|---|---|---|
| **Sample Point Number** | **Sample Point Location, WasteType/sample Contents and Treatment Description (as applicable)** | |
| 001 | WSF-1: Sample Point (1) is for liquid manure from waste storage facility 1( WSF-1), located at the Main Dairy Site. WSF-1 is a clay-lined storage structure located east of the sand settling lane. The facility has a capacity of approximately 3.2 million gallons and was constructed in 1996. This storage structure accepts manure and process wastewater produced at the Main Dairy. | |
| 002 | WSF-2: Sample Point (2) is for liquid manure from waste storage facility 2 (WSF-2) located at the Main Dairy Site. WSF-2 is a clay-lined storage structure located north of the feed storage pad. The structure has a capacity of approximately 10.4 million gallons and was constructed in 2011. This storage accepts manure and process wastewater produced at the Main Dairy. | |
| 003 | Slurry Store: Sample Point (3) is for liquid manure from waste storage facility 3 (WSF-3) "Slurry Store", located at the Heifer Site. WSF-3 is an above ground storage structure located east of the outdoor heifer lots. The structure has a capacity of approximately 726,000 gallons and was constructed in 1985. This storage accepts manure and feedlot runoff from the operation's outdoor concrete heifer lots. In 2019 Bomaz Farms replaced transfer pipes associated with the structure. | |
| 004 | Composting Pad: Sample Point (4) is for material from the composting pad that is directly land applied. This pad is located south of WSF-2. This structure is an unroofed concrete pad constructed in 2016. Runoff from the structure gravity flows to WSF-2. | |
| 006 | WSF-4 (New): Sample Point (6) is for liquid manure from waste storage facility 4 (WSF-4) located at the Main Dairy Site. WSF-4 is a concrete-lined storage structure located north of WSF-2. The structure was constructed in 2020 and has a volume capacity of approximately 22.5 million gallons. This storage will accept manure and process wastewater produced at the Main Dairy. | |
| 007 | Solid Manure: Sample Point (7) is for all solid manure sources that are directly land applied and not stored in a waste storage facility. This includes solid sources such as calf hutch manure, maternity pen bed-pack, heifer bed-pack, manure laden sand from the sand lane, etc. Representative samples shall be taken for each manure source type. | |
| 008 | Headland Stacking: Sample Point (8) is for solid manure stacked on approved headland stacking locations. Representative samples shall be taken of this material prior to land application. Note: Headland stacking sites are subject to production site discharge limitations; weekly visual monitoring is required during use of stacking sites to ensure discharges to waters of the state do not occur. | |
| 010 | Feed Storage Pad: Sample Point (10) is for visual monitoring and inspection of the feed storage pad and associated runoff control system located at the Main Dairy Site. Proper operation and maintenance are required to ensure discharges meet permit requirements. Weekly inspections are required and shall be recorded according to monitoring program. | |
| 011 | Stormwater Controls: Sample Point (11) is for visual monitoring and inspection of all production site storm water conveyance systems. This includes roof gutter and downspout structures, drainage tile systems, grassed waterways and other diversion systems that transport uncontaminated storm water. Proper operation and maintenance are required to keep uncontaminated runoff diverted away from manure and process wastewater handling systems. Weekly inspections are required and shall be recorded according to monitoring program. | |
| 012 | Outdoor Animal Lots & Runoff Control System: Sample Point (12) is for visual monitoring and inspection of the outdoor heifer lots, along with the associated runoff control systems located at the Bomaz Heifer Site. Outdoor animal lot runoff is pumped into waste storage facility 003 – "Slurry Store". Proper | |

| Sample Point Designation for Animal Waste | | |
|---|---|---|
| **Sample Point Number** | **Sample Point Location, WasteType/sample Contents and Treatment Description (as applicable)** | |
| | operation and maintenance are required to ensure discharges to waters of the state do not occur. Weekly inspections are required and shall be recorded according to monitoring program. | |

# 1 Livestock Operations - Proposed Operation and Management

**Production Area Discharge Limitations**

Beginning on the effective date of the permit, the permittee may not discharge pollutants from the operation's production area (e.g., manure storage areas, outdoor animal lots, composting and leachate containment systems, milking center wastewater treatment/containment systems, raw material storage areas) to navigable waters, except in the event a 25-year, 24-hour rainfall event (or greater) causes the discharge from a structure which is properly designed and maintained to contain a 25-year, 24-hour rainfall event for this location as determined under s. NR 243.04. If an allowable discharge occurs from the production area, state water quality standards may not be exceeded.

**Runoff Control**

The permit requires control of contaminated runoff from all elements of the production area to prevent a discharge of pollutants to navigable waters in accordance with the Production Area Discharge Limitations and to comply with surface water quality standards and groundwater standards. Beginning on the effective date of this permit, (if needed) interim measures shall be implemented to prevent discharges of pollutants to navigable waters. In addition, permanent runoff control system(s) shall be designed, operated and maintained in accordance with the requirements found in USDA Natural Resources Conservation Service standards and ch. NR 243, Wis. Adm. Code. If any upgrading or modifications to runoff controls are necessary, formal engineering plans and specifications must be submitted to the Department for approval.

**Manure and Process Wastewater Storage**

The permit requires the operation to have adequate storage for manure and process wastewater and that storage or containment facilities are designed, operated and maintained to prevent overflows and discharges to waters of the state. In order to prevent overflows, the permittee must maintain levels of materials in liquid storage or containment facilities at or below certain levels including a one-foot margin of safety that can never be exceeded. If any upgrading or modifications to the storage facilities are necessary, formal engineering plans and specifications must be submitted to the Department for approval.

Bomaz Farms currently has approximately 484 days of storage for liquid manure. The permittee must maintain 180 days of storage, unless temporary reductions in required storage are approved by the Department.

**Solid Manure Stacking**

The operation has proposed to stack solid manure. All stacking of solid manure shall be done in accordance ch. NR 243, Wis. Adm. Code, which includes restrictions from NRCS Standard 313. Stacking of manure is considered to be part of the production area and is subject to the Production Area Discharge Limitations.

**Ancillary Service and Storage Areas**

The permittee shall take preventative maintenance actions and conduct visual inspections to minimize pollutant discharges from areas of the operation that are not part of the production area or land application areas. These areas are called

ancillary service and storage areas and include access roads, shipping and receiving areas, maintenance areas, refuse piles and CAFO outdoor vegetated areas.

**Nutrient Management**

With 1,745 animal units (800 milking & dry cows, 700 heifers, and 150 calves), it is estimated that approximately 13,598,438 gallons of manure and process wastewater will be produced during the first year. After the proposed expansion, Bomaz Farms will operate with 2,905 animal units (1,600 milking & dry cows, 700 heifers, and 350 calves). After expansion it is estimated that approximately 27,338,251 gallons of manure and process wastewater will be produced per year. In addition to the increased animal numbers, the farm will be collecting additional runoff from the feed storage pad. This increased volume is included in the estimated waste generation totals.

Bomaz Farms owns *approximately* 950.7 acres of cropland and rents about 2,202.3 additional acres. The permit requires all landspreading of manure and process wastewater be completed in accordance with an approved nutrient management plan. The permit will require sampling and analysis of manure and process wastewater that will be landspread. Landspreading rates must be adjusted based on sample analysis. The permit requires the permittee to maintain a daily log that documents landspreading activities. The permit also requires the submittal of an annual report that summarizes all landspreading activities. Plans must be updated annually to reflect cropping plans and other operational changes. Among the requirements, the plans must include detailed landspreading information including field by field nutrient budgets.

The permittee is required to implement a number or practices to address potential water quality impacts associated with the land application of manure and process wastewater. Among the permit conditions are restrictions on manure ponding, restrictions on runoff of manure and process wastewater from cropped fields, and setbacks from wells and direct conduits to groundwater (e.g., sinkholes, fractured bedrock at the surface). In addition, the permittee must implement a phosphorus based nutrient management plan that addresses phosphorus delivery to surface waters by basing manure and process wastewater applications on soil test phosphorus levels or the Wisconsin Phosphorus index. Additional phosphorus application restrictions apply to fields that are high in soil test phosphorus (>100 ppm).

The permittee must also implement conservation practices when applying manure near navigable waters and their conduits, referred to as the Surface Water Quality Management Area (SWQMA). These practices include a 100-foot setback from navigable waters and their conduits, a 35-foot vegetated buffer adjacent to the navigable water or conduit, or a practice that provides equivalent pollutant reductions equivalent to or better than the 100-foot setback.

In addition, the permittee must comply with restrictions on land application of manure and process wastewater on frozen or snow-covered ground. Included in these restrictions is a prohibition on surface applications of solid manure ($\geq$12% solids) on frozen or snow-covered ground during February and March. Beginning August 1, 2010, non-emergency surface applications of liquid manure (<12%) on frozen or snow-covered ground are prohibited.

**Monitoring and Sampling Requirements**

The permittee must submit a monitoring and inspection program that outlines how the permittee will conduct self-inspections to determine compliance with permit conditions. These self-inspections include visual inspections of water lines, diversion devices, storage and containment structures and other parts of the production area. The permit requires periodic inspections and calibrations of landspreading equipment. The permittee must take corrective actions to problems identified inspections or otherwise notify the Department. Samples of manure, process wastewater and soils receiving land applied materials from the operation must also be collected and analyzed.

**Sampling Points**

The permit identifies the different sources of land applied materials (e.g., manure storage facilities, milking centers, egg-washing facilities) as "Sampling Points." For these Sampling Points, the permittee is required to sample and analyze the different sources for nutrients and other parameters which serve as the basis for determining rates of application for these materials. Other areas are also identified as Sampling Points as a means of identifying them as areas requiring action by

the permittee, such as an upgrade or evaluation of a certain system or structure (e.g., runoff control systems), even though sampling is not actually required.

## Sample Point Number: 001- WSF-1; 002- WSF-2; 003- Slurry Store; 006- WSF-4 (New)

| Monitoring Requirements and Limitations | | | | | |
|---|---|---|---|---|---|
| **Parameter** | **Limit Type** | **Limit and Units** | **Sample Frequency** | **Sample Type** | **Notes** |
| Nitrogen, Total | | lb/1000gal | 2/Month | Grab | |
| Nitrogen, Available | | lb/1000gal | 2/Month | Calculated | |
| Phosphorus, Total | | lb/1000gal | 2/Month | Grab | |
| Phosphorus, Available | | lb/1000gal | 2/Month | Calculated | |
| Solids, Total | | Percent | 2/Month | Grab | |

### 1.1.1 Changes from Previous Permit

Sample Point 006 for Waste Storage Facility 4 (WSF-4) has been added.

### 1.1.2 Explanation of Operation and Management Requirements

Waste from the structure will need to be sampled and land applied according to the farm's NMP.

## Sample Point Number: 004- Compost pad; 007- Solid Manure; 008- Headland Stacking Sites

| Monitoring Requirements and Limitations | | | | | |
|---|---|---|---|---|---|
| **Parameter** | **Limit Type** | **Limit and Units** | **Sample Frequency** | **Sample Type** | **Notes** |
| Nitrogen, Total | | lbs/ton | Quarterly | Grab | |
| Nitrogen, Available | | lbs/ton | Quarterly | Calculated | |
| Phosphorus, Total | | lbs/ton | Quarterly | Grab | |
| Phosphorus, Available | | lbs/ton | Quarterly | Calculated | |
| Solids, Total | | Percent | Quarterly | Grab | |

### 1.1.3 Changes from Previous Permit

Sample Point 008 has been added to reflect the use of headland stacking sites used by Bomaz Farms. Location of approved stacking sites are listed in the Amended Conditional NMP Approval issued on March 17, 2021.

### 1.1.4 Explanation of Operation and Management Requirements

Stacked material will need to be sampled for nutrient content prior to being land applied.

### Sample Point Number: 010- Feed Storage Pad & Runoff; 011- Stormwater Controls, and 012- Outdoor Animal Lots

#### 1.1.5 Changes from Previous Permit

Sample Point 011 for Stormwater Control systems has been added.

#### 1.1.6 Explanation of Operation and Management Requirements

The farm will be required to inspect production area stormwater control systems.

# 2 Schedules

## 2.1 Emergency Response Plan

| Required Action | Due Date |
|---|---|
| Develop Emergency Response Plan: Develop a written Emergency Response Plan within 30 days of permit coverage, available to the Department upon request. | 07/01/2021 |

## 2.2 Monitoring & Inspection Program

| Required Action | Due Date |
|---|---|
| Proposed Monitoring and Inspection Program: Consistent with the Monitoring and Sampling Requirements subsection, the permittee shall submit a proposed monitoring and inspection program within 90 days of the effective date of this permit. | 08/30/2021 |

## 2.3 Annual Reports

Submit Annual Reports by January 31st of each year in accordance with the Annual Reports subsection in Standard Requirements.

| Required Action | Due Date |
|---|---|
| Submit Annual Report #1: To include monitoring and inspection results from the previous 12 months, consistent with the requirements of department form 3400-025E. | 01/31/2022 |
| Submit Annual Report #2: To include monitoring and inspection results from the previous 12 months, consistent with the requirements of department form 3400-025E. | 01/31/2023 |
| Submit Annual Report #3: To include monitoring and inspection results from the previous 12 months, consistent with the requirements of department form 3400-025E. | 01/31/2024 |
| Submit Annual Report #4: To include monitoring and inspection results from the previous 12 months, consistent with the requirements of department form 3400-025E. | 01/31/2025 |
| Submit Annual Report #5: To include monitoring and inspection results from the previous 12 months, consistent with the requirements of department form 3400-025E. | 01/31/2026 |

| | |
|---|---|
| Ongoing Annual Reports: Continue to submit Annual Reports until permit reissuance has been completed. | |

## 2.4 Nutrient Management Plan

| Required Action | Due Date |
|---|---|
| Management Plan Submittal: Submit any necessary updates to the Nutrient Management Plan to meet the conditions outlined in this permit (see conditions in the Livestock Operational and Sampling Requirements section). | |
| Management Plan Annual Update #1: Submit an Annual Update to the Nutrient Management Plan by March 31st of each year. Note: In addition to Annual Updates, submit Management Plan Amendments to the Department for written approval prior to implementation of any changes to nutrient management practices, in accordance with the Nutrient Management requirements in the Livestock Operational and Sampling Requirements section. | 03/31/2022 |
| Management Plan Annual Update #2: Submit an Annual Update to the Nutrient Management Plan. | 03/31/2023 |
| Management Plan Annual Update #3: Submit an Annual Update to the Nutrient Management Plan. | 03/31/2024 |
| Management Plan Annual Update #4: Submit an Annual Update to the Nutrient Management Plan. | 03/31/2025 |
| Management Plan Annual Update #5: Submit an Annual Update to the Nutrient Management Plan. | 03/31/2026 |
| Ongoing Management Plan Annual Updates: Continue to submit Annual Updates to the Nutrient Management Plan until permit reissuance has been completed. | |

## 2.5 Submit Permit Reissuance Application

| Required Action | Due Date |
|---|---|
| Reissuance Application: Submit a complete permit reissuance application 180 days prior to permit expiration. | 12/02/2025 |

## 2.6 Explanation of Schedules

Items included in the permit schedule are standard CAFO permit requirements. Onsite expansion and system upgrades were completed prior to permit reissuance.

# Other Comments:

N/A

# Proposed Expiration Date:

May 31, 2026

**Prepared By:**

**Jeffrey Jackson** **Agricultural Runoff Management Specialist**

Date: March 30, 2021